

LAPORAN

PEMROGRAMAN MOBILE

Disusun guna memenuhi tugas mata kuliah pemrograman mobile

Dosen Pengampu : Septian Enggar Sukmana, S.Pd., M.T.



Disusun Oleh :

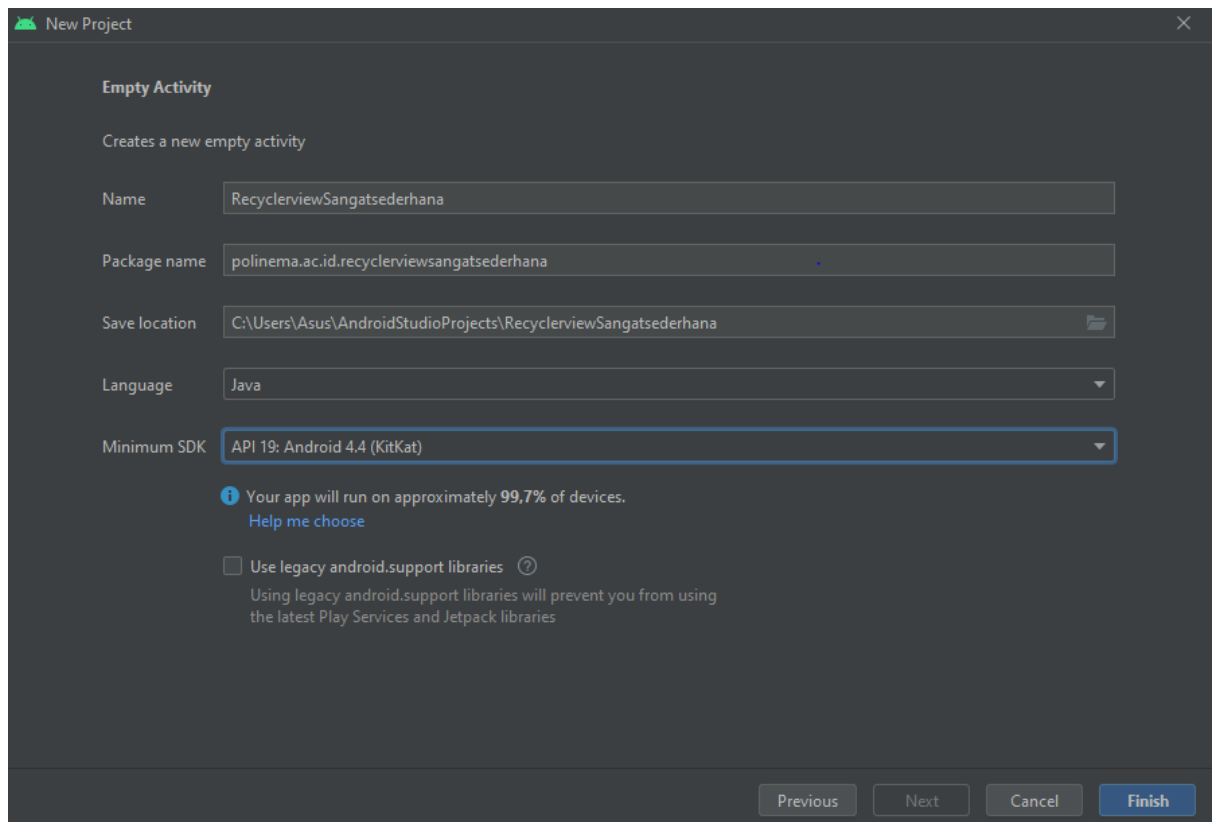
Nicola Arieska Fonda

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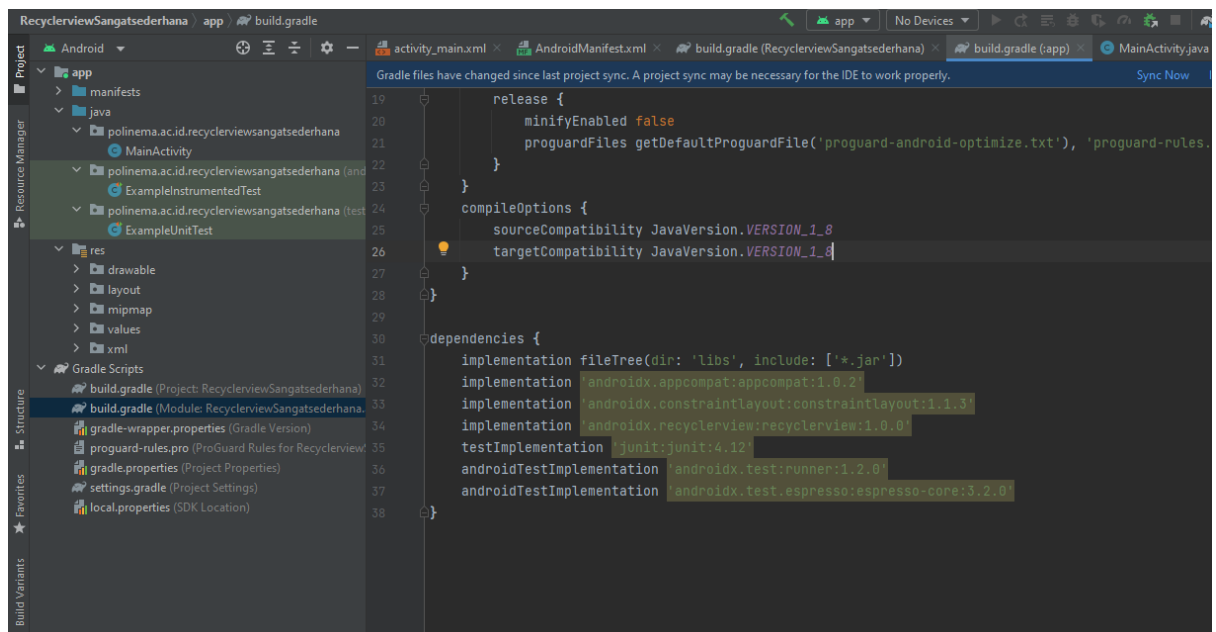
PROGRAM STUDI D-IV TEKNIK INFORMATIKA
JURUSAN TEKNOLOGI INFORMASI
POLITEKNIK NEGERI MALANG
MALANG
2022

PRAKTIKUM – 1

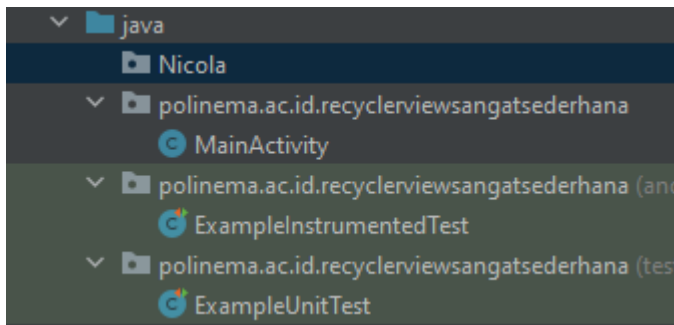
1. Buatlah sebuah project baru sesuaikan konfigurasi project ini dengan environment SDK pada Android Studio anda



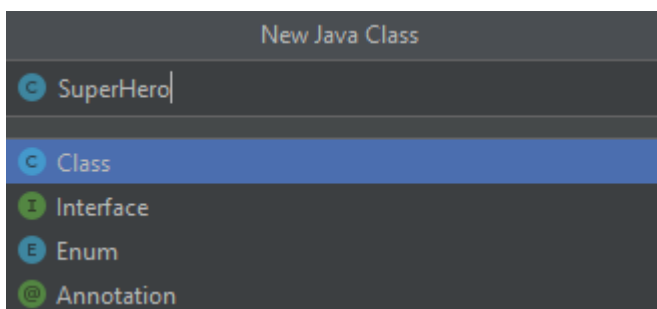
2. Perhatikan target sdk version yang anda gunakan pada file build.gradle untuk module app dan isikan recyclerview yang sesuai dengan kebutuhan anda.



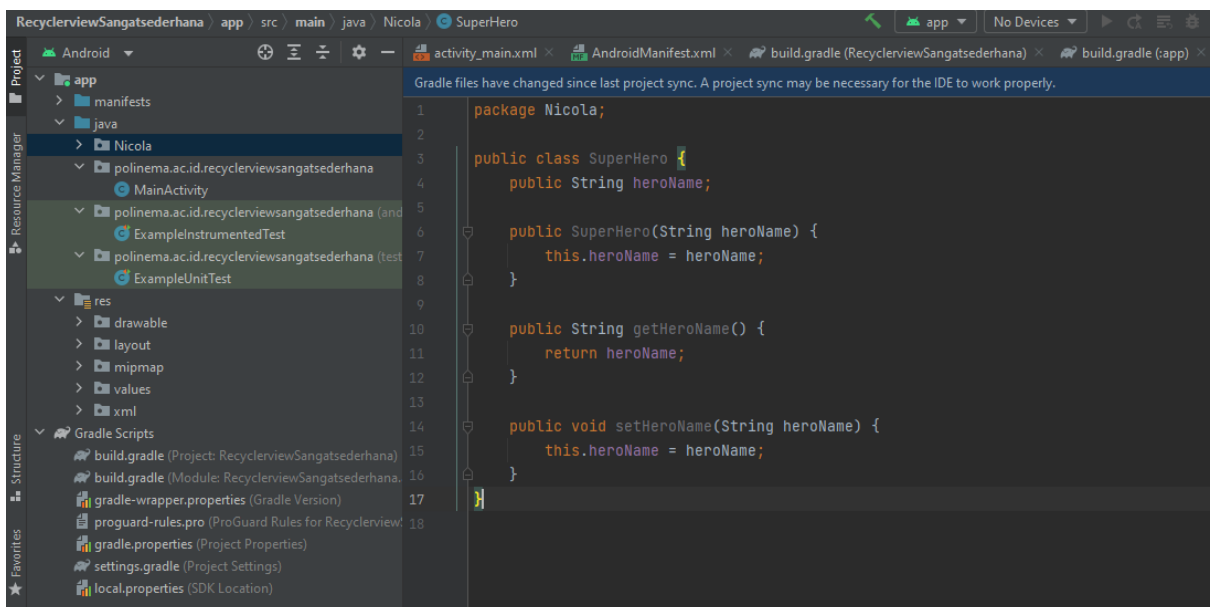
3. Agar file file yang ada pada project tersusun rapi buatlah sebuah package dengan nama `models` sebagai tempat untuk menyimpan file models.



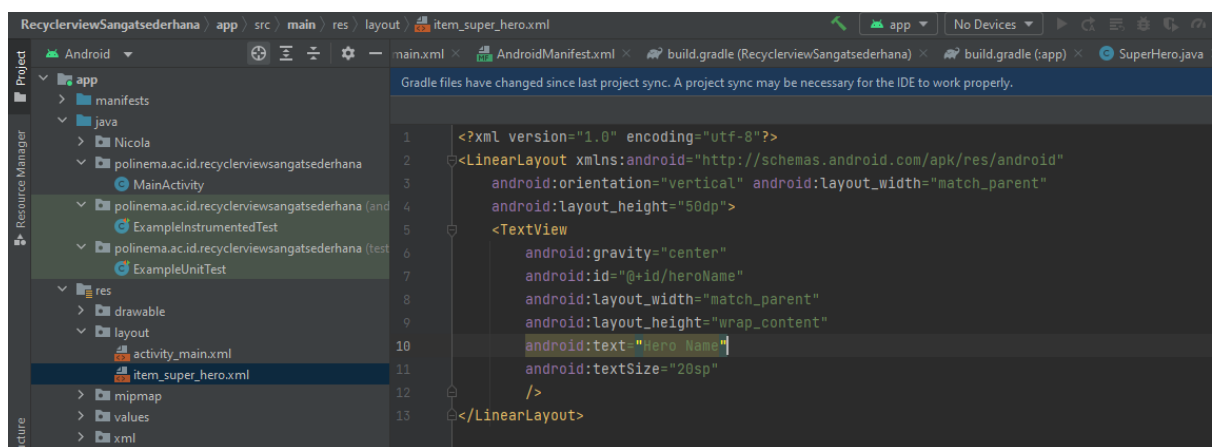
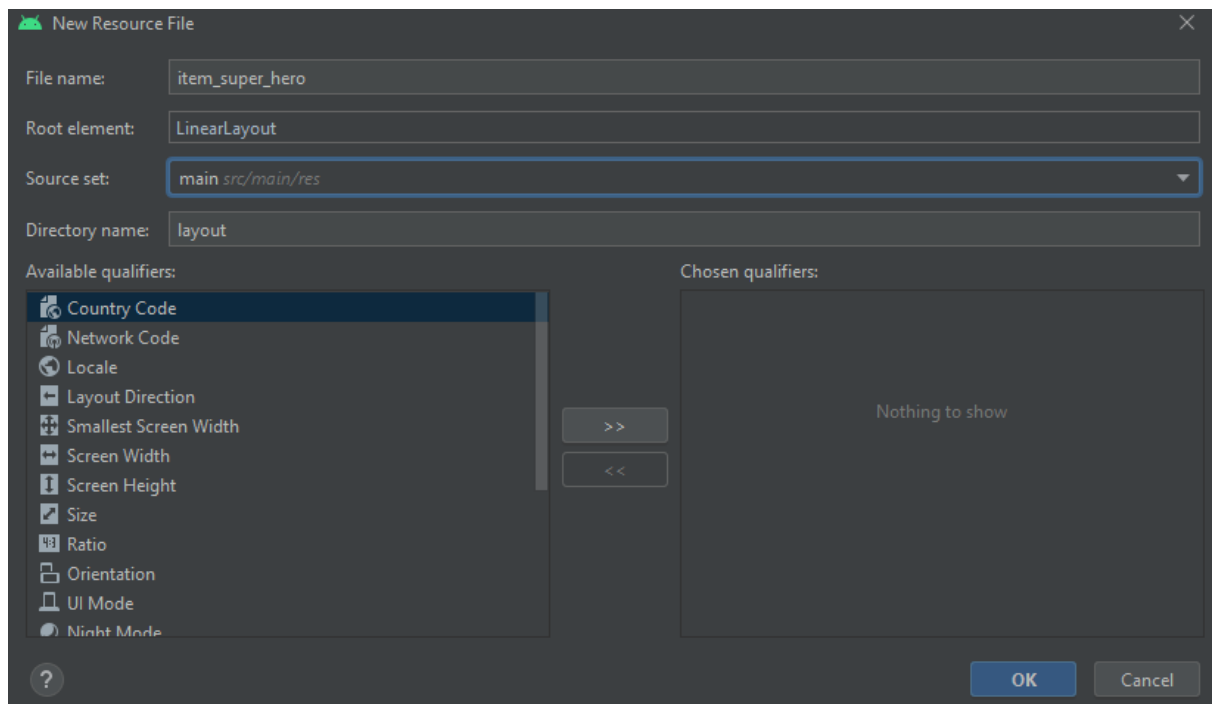
4. Buatlah sebuah file baru pada package models beri nama file tersebut SuperHero dan beri tipe class



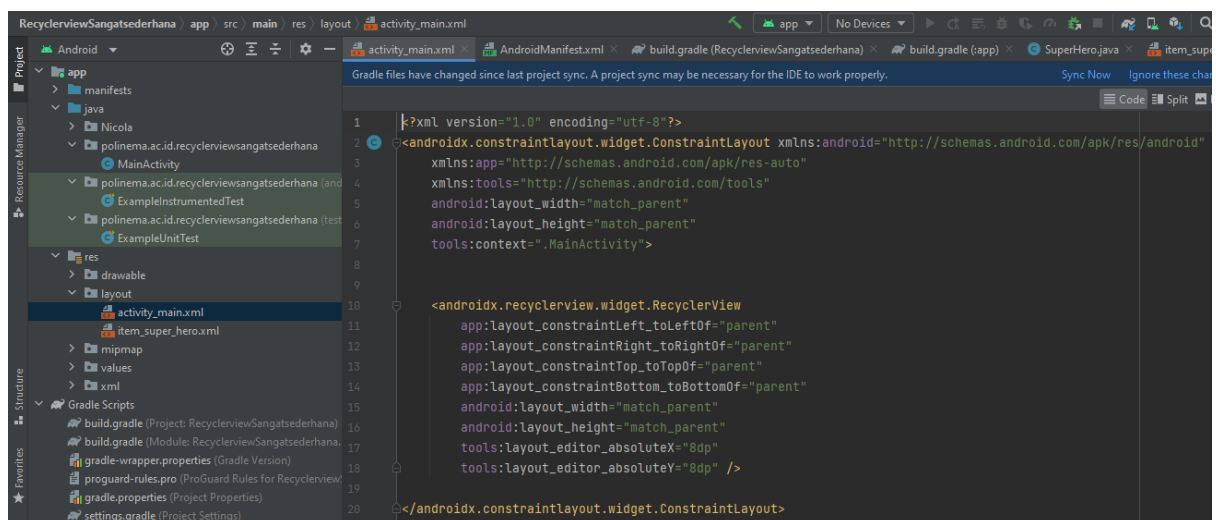
5. Isilah class SuperHero dengan sebuah attribut public bernama `heroName` dan lengkapi dengan konstruktor serta setter dan getter

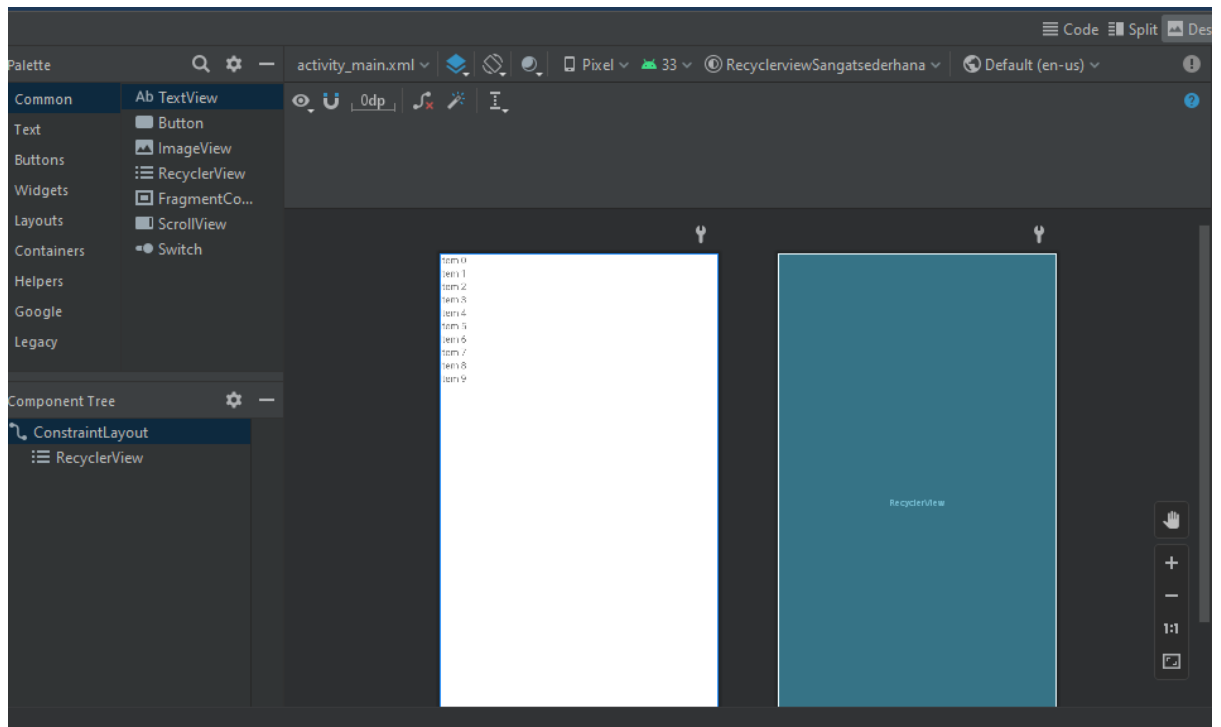


6. Layout pada recyclerview ini berupa sebuah layout xml sederhana silahkan anda memilih layout mana saja asalkan dapat menampilkan sebuah textview.

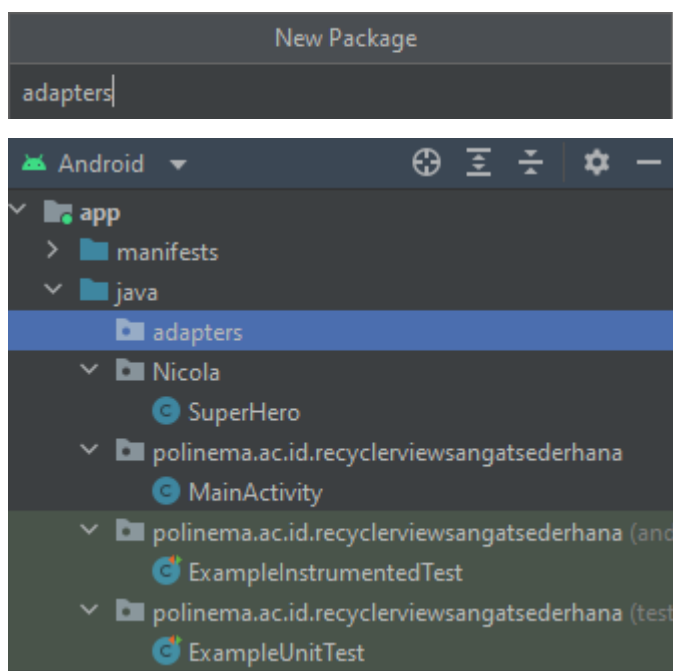


7. Bukalah file `activity_main.xml` kemudian hapus `textView hello world` nya. Kemudian isikan sebuah `recyclerview` dan setting constraint nya untuk memenuhi seluruh layar.

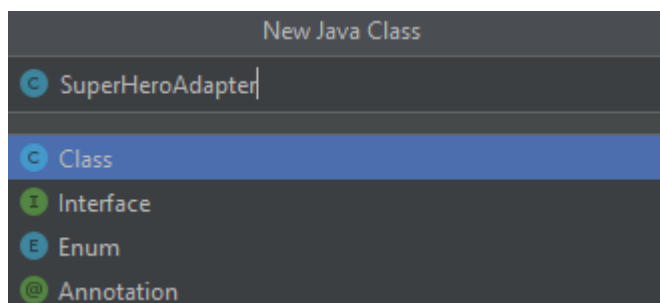




8. Buatlah package adapters pada project dengan langkah berikut ini :



9. Buatlah sebuah class pada package adapters berilah nama SuperHeroAdapter

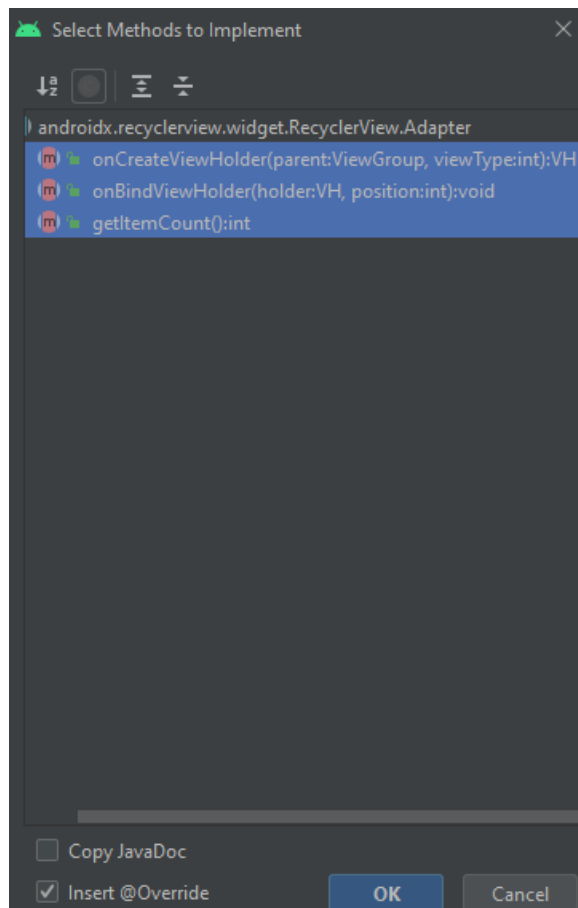


```
1 package adapters;
2
3 public class SuperHeroAdapter {
4
5
```

10. Sebuah adapter harus melakukan extend ke class RecyclerView.Adapter, perhatikan gambar dibawah ini untuk melihat langkah pembuatan extend nya. Pada langkah ini akan terjadi error yang akan kita perbaiki pada tahap selanjutnya

```
1 package adapters;
2
3 import androidx.recyclerview.widget.RecyclerView;
4
5 public class SuperHeroAdapter extends RecyclerView.Adapter<SuperHeroAdapter.MyViewHolder> {
6
7
```

11. Pindahkan cursor pada awal class RecyclerView kemudian pilih alt+insert untuk windows atau alt + enter untuk mac os kemudian pilih Implements Methods.

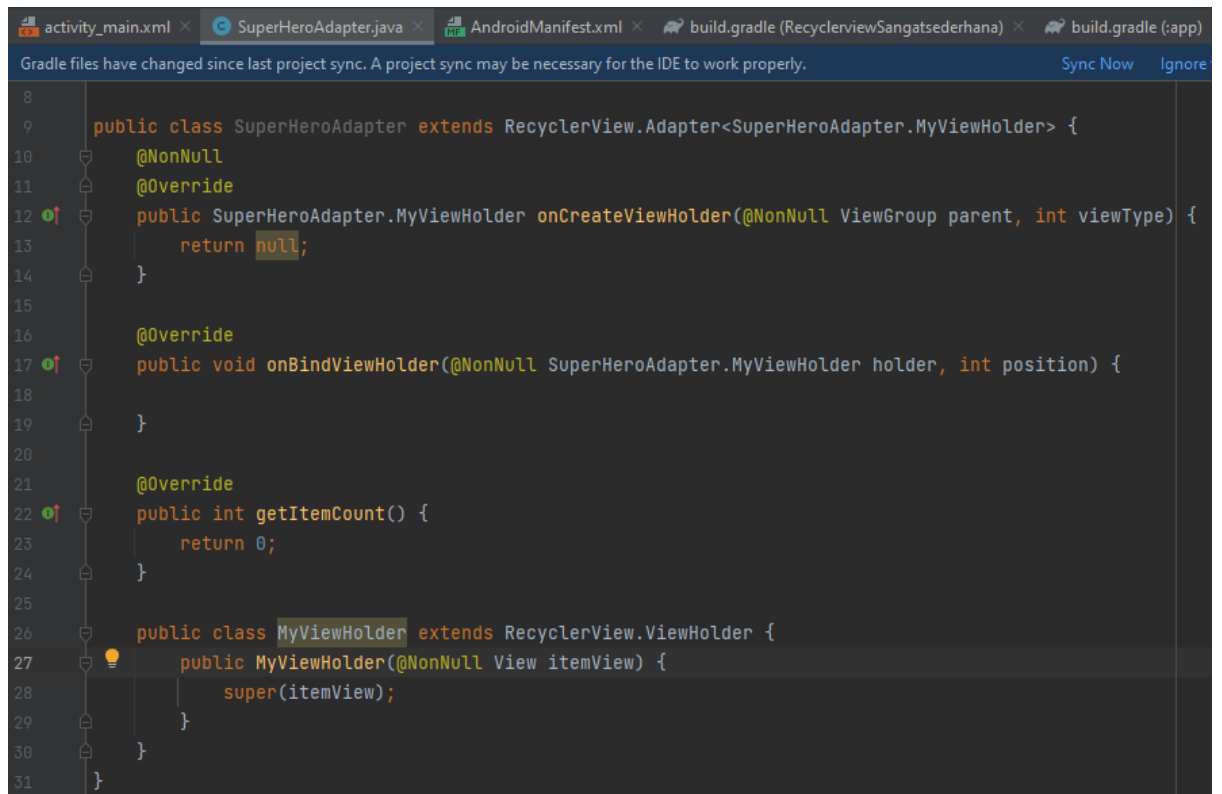


```
1 package adapters;
2
3 import android.view.ViewGroup;
4
5 import androidx.annotation.NonNull;
6 import androidx.recyclerview.widget.RecyclerView;
7
8 public class SuperHeroAdapter extends RecyclerView.Adapter<SuperHeroAdapter.MyViewHolder> {
9     @NonNull
10    @Override
11    public SuperHeroAdapter.MyViewHolder onCreateViewHolder(@NonNull ViewGroup parent, int viewType) {
12        return null;
13    }
14
15    @Override
16    public void onBindViewHolder(@NonNull SuperHeroAdapter.MyViewHolder holder, int position) {
17
18    }
19
20    @Override
21    public int getItemCount() {
22        return 0;
23    }
24 }
```

12. Sampai pada saat ini class yang anda buat masih error, lanjutkan dengan memindahkan cursor ke `MyViewHolder` kemudian tekan kembali `alt+insert` atau `alt+enter` kemudian pilih `create class`. Class nya masih error arahkan cursor ke `SuperHeroAdapter.MyViewHolder` kemudian pilih opsi `Make MyViewHolder extends ...`

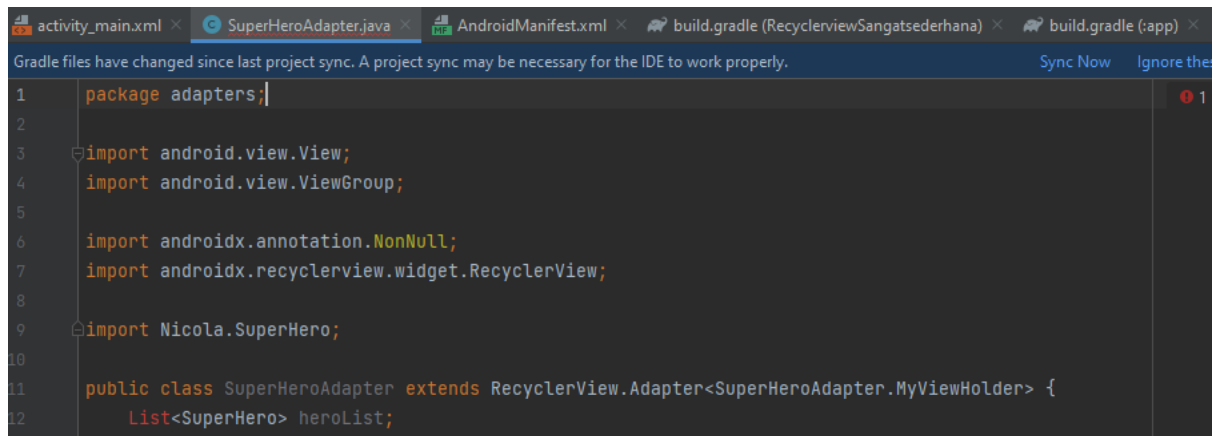
```
7
8 public class SuperHeroAdapter extends RecyclerView.Adapter<SuperHeroAdapter.MyViewHolder> {
9     @NonNull
10    @Override
11    public SuperHeroAdapter.MyViewHolder onCreateViewHolder(@NonNull ViewGroup parent, int viewType) {
12        return null;
13    }
14
15    @Override
16    public void onBindViewHolder(@NonNull SuperHeroAdapter.MyViewHolder holder, int position) {
17
18    }
19
20    @Override
21    public int getItemCount() {
22        return 0;
23    }
24
25    public class MyViewHolder extends RecyclerView.ViewHolder {
26    }
27 }
```

13. Pindahkan kursor ke kode program yang masih merah kemudian tekan kembali `alt+enter` atau `alt+insert` kemudian pilih opsi `create constructor matching super`



```
8
9 public class SuperHeroAdapter extends RecyclerView.Adapter<SuperHeroAdapter.MyViewHolder> {
10     @NonNull
11     @Override
12     public SuperHeroAdapter.MyViewHolder onCreateViewHolder(@NonNull ViewGroup parent, int viewType) {
13         return null;
14     }
15
16     @Override
17     public void onBindViewHolder(@NonNull SuperHeroAdapter.MyViewHolder holder, int position) {
18
19     }
20
21     @Override
22     public int getItemCount() {
23         return 0;
24     }
25
26     public class MyViewHolder extends RecyclerView.ViewHolder {
27         public MyViewHolder(@NonNull View itemView) {
28             super(itemView);
29         }
30     }
31 }
```

14. Berikan variabel untuk menampung data dari activity, karena adapter membutuhkan data data ini diambil dari activity oleh karena itu buatlah sebuah variabel berupa list of SuperHero dengan nama heroList



```
1 package adapters;
2
3 import android.view.View;
4 import android.view.ViewGroup;
5
6 import androidx.annotation.NonNull;
7 import androidx.recyclerview.widget.RecyclerView;
8
9 import Nicola.SuperHero;
10
11 public class SuperHeroAdapter extends RecyclerView.Adapter<SuperHeroAdapter.MyViewHolder> {
12     List<SuperHero> heroList;
```

15. Setelah itu buatlah constructor untuk class ini dengan menekan shortcut `alt + insert` pada windows atau `cmd+n` pada mac.


```
activity_main.xml x SuperHeroAdapter.java x AndroidManifest.xml x build.gradle (RecyclerviewSangatsederhana) x build.gradle (:app)
Gradle files have changed since last project sync. A project sync may be necessary for the IDE to work properly. Sync Now Ignore

1 package adapters;
2
3 import android.view.View;
4 import android.view.ViewGroup;
5
6 import androidx.annotation.NonNull;
7 import androidx.recyclerview.widget.RecyclerView;
8
9 import Nicola.SuperHero;
10
11 public class SuperHeroAdapter extends RecyclerView.Adapter<SuperHeroAdapter.MyViewHolder> {
12     public SuperHeroAdapter(List<SuperHero> heroList) {
13         this.heroList = heroList;
14     }
15
16     List<SuperHero> heroList;
17
18     @NonNull
19     @Override
20     public SuperHeroAdapter.MyViewHolder onCreateViewHolder(@NonNull ViewGroup parent, int viewType) {
21         return null;
22     }
}
```

16. Mengisi semua function di adapter yaitu Inner Class ViewHolder, Get Item Count, onCreateViewHolder, onBindViewHolder serta lakukan instansiasi RecyclerView, Model, dan Adapter. Langkah terakhir yaitu Set Adapter dan Layout Manager

```
tttings.gradle (RecyclerviewSangatsederhana) x local.properties x build.gradle (RecyclerviewSangatsederhana) x strings.xml x SuperHeroAdapter.java x
1 package polinema.ac.id.recyclerviewsangatsederhana.adaptersnicola;
2
3 import ...
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19 public class SuperHeroAdapter extends RecyclerView.Adapter<SuperHeroAdapter.MyViewHolder> {
20     List<SuperHero> heroList;
21
22     public SuperHeroAdapter(List<SuperHero> heroList) { this.heroList = heroList; }
23
24
25
26     @NonNull
27     @Override
28     public SuperHeroAdapter.MyViewHolder onCreateViewHolder(@NonNull ViewGroup parent, int viewType) {
29         Context context = parent.getContext();
30         LayoutInflater inflater = LayoutInflater.from(context);
31         View superHeroView = inflater.inflate(R.layout.item_super_hero, parent, attachToRoot: false);
32         MyViewHolder viewHolder = new MyViewHolder(superHeroView);
33         return viewHolder;
34     }
35
36     @Override
37     public void onBindViewHolder(@NonNull SuperHeroAdapter.MyViewHolder holder, int position) {
38         //ambil satu item hero
39         SuperHero hero = heroList.get(position);
40         //set text heroName berdasarkan data dari model hero
41         holder.heroName.setText(hero.getHeroName());
42     }
}
```

```

44         @Override
45         public int getItemCount() { return heroList.size(); }
46
47
48
49         public class MyViewHolder extends RecyclerView.ViewHolder {
50             public TextView heroName;
51             public MyViewHolder(@NonNull View itemView) {
52                 super(itemView);
53                 heroName = itemView.findViewById(R.id.heroName);
54             }
55         }
56     }
57

```

```

16     public class MainActivity extends AppCompatActivity {
17         //instansiasi RecyclerView
18         RecyclerView rvSuperHero;
19         //instansiasi list superhero
20         List<SuperHero> listSuperHero = new ArrayList<>();
21         @Override
22         protected void onCreate(Bundle savedInstanceState) {
23             super.onCreate(savedInstanceState);
24             setContentView(R.layout.activity_main);
25             //menyambungkan rvSuperHero ke layout
26             rvSuperHero = findViewById(R.id.rvSuperHero);
27             //Membuat object hero
28             SuperHero hero = new SuperHero( heroName: "Petruk");
29             //menambahkan hero ke listSuperHero
30             listSuperHero.add(hero);
31             //membuat object hero baru
32             hero = new SuperHero( heroName: "Gareng");
33             //menambahkan hero baru ke listSuperhero
34             listSuperHero.add(hero);
35             //Instansiasi Adapter
36             SuperHeroAdapter superHeroAdapter = new SuperHeroAdapter(listSuperHero);
37             //set adapter dan layoutManager
38             rvSuperHero.setAdapter(superHeroAdapter);
39             rvSuperHero.setLayoutManager(new LinearLayoutManager( context: this));
40         }
41     }

```

17. Hasil akhir ketika di run pada mobile

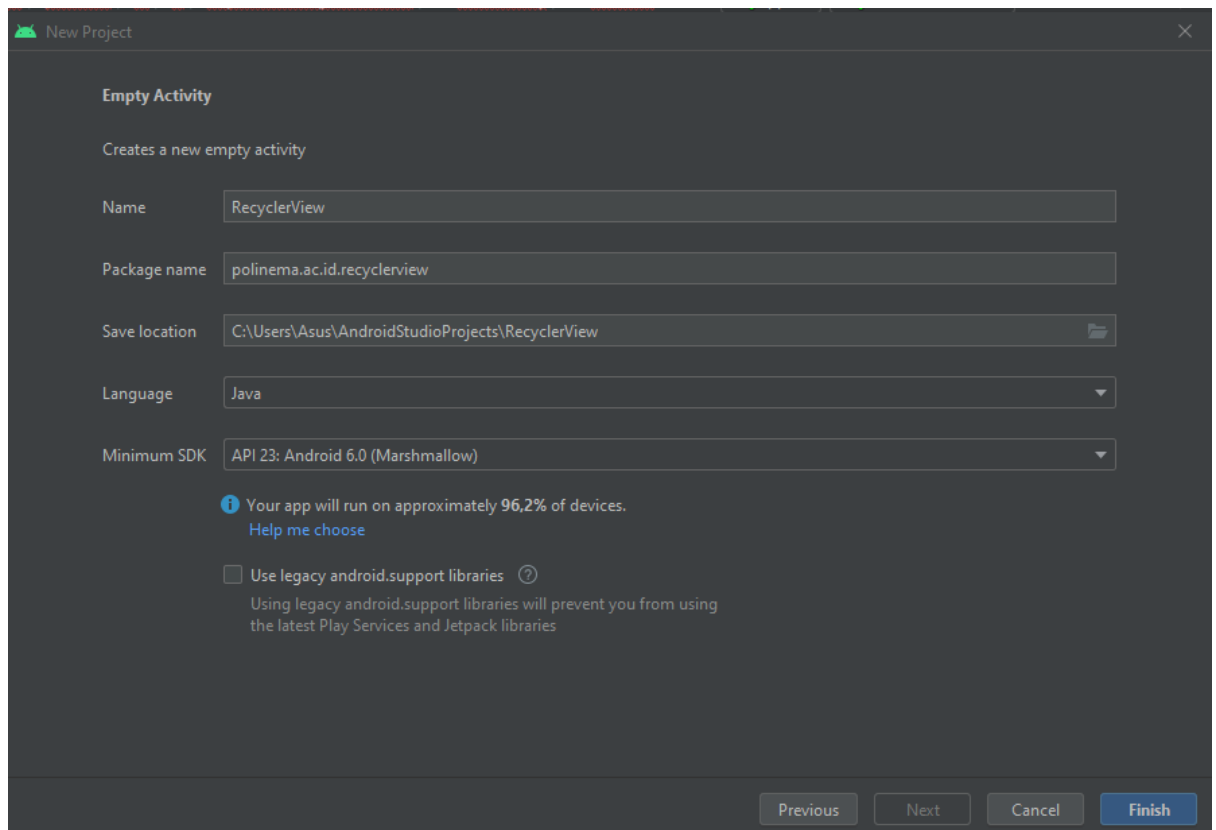
RecyclerviewSangatsederhana

Petruk

Gareng

PRAKTIKUM – 2

1. Buat new project dengan nama **recyclerview**.



2. Membuat dependency, model, dan membuat layout pada main activity dan membuat semua kode yang dibutuhkan.

```

1 package id.primadev.Nicola;
2
3 import ...
4
5
6
7
8
9
10
11
12
13
14
15
16
17 public class ContactAdapter extends RecyclerView.Adapter<ContactAdapter.ContactViewHolder>{
18
19     private List<Contact> listContact = new ArrayList<>();
20
21     public ContactAdapter(List<Contact> listContact) { this.listContact = listContact; }
22     //
23
24     private OnContactClickListener listener;
25
26
27     public interface OnContactClickListener {
28         public void onClick(View view, int position);
29     }
30
31     public void setListener(OnContactClickListener listener) { this.listener = listener; }
32     //
33
34     @NonNull
35     @Override
36     public ContactViewHolder onCreateViewHolder(@NonNull ViewGroup viewGroup, int i) {
37         View vh = LayoutInflater.
38             from(viewGroup.getContext()).
39             inflate(R.layout.item_contact, viewGroup, attachToRoot: false);
40         ContactViewHolder viewHolder = new ContactViewHolder(vh);
41         return viewHolder;
42     }
43

```

```

44
45     @Override
46     public void onBindViewHolder(@NonNull ContactViewHolder contactViewHolder, int i) {
47
48         Contact item = listContact.get(i);
49         contactViewHolder.txtPhone.setText(item.getPhone());
50         contactViewHolder.txtName.setText(item.getName());
51         Picasso.get().load(item.getImageUrl())
52             .placeholder(R.drawable.ic_launcher_background)
53             .into(contactViewHolder.imageContact);
54     }
55
56     @Override
57     public int getItemCount() { return listContact.size(); }
58     //
59
60     public class ContactViewHolder extends RecyclerView.ViewHolder {
61         public ImageView imageContact;
62         public TextView txtName, txtPhone;
63
64         public ContactViewHolder(@NonNull View itemView) {
65             super(itemView);
66             imageContact = itemView.findViewById(R.id.imageContact);
67             txtName = itemView.findViewById(R.id.txtName);
68             txtPhone = itemView.findViewById(R.id.txtPhone);
69             itemView.setOnClickListener((v) -> {
70                 listener.onClick(v, getAdapterPosition());
71             });
72         }
73     }
74
75
76 }

```

```

AndroidManifest.xml × ContactAdapter.java × MainActivity.java ×
1 package id.primadev.Nicola;
2
3 import ...
14
15 public class MainActivity extends AppCompatActivity implements ContactAdapter.OnContactClickListener {
16
17     public RecyclerView rv;
18     public ContactAdapter contactAdapter;
19     public RecyclerView.LayoutManager layoutManager;
20     public List<Contact> listContact = new ArrayList<>();
21
22     @Override
23     protected void onCreate(Bundle savedInstanceState) {
24         super.onCreate(savedInstanceState);
25         setContentView(R.layout.activity_main);
26
27         rv = findViewById(R.id.rvContact);
28         //List kontak yang akan di tampilkan (nama, telepon, url gambar
29
30         listContact.add(new Contact( name: "Iron Man",
31                                     phone: "102018308",
32                                     imageUrl: "https://cdn4.iconfinder.com/data/icons/famous-characters-add-on-vol-1-flat/48/Famous_Chara
33
34         listContact.add(new Contact( name: "Bat Man",
35                                     phone: "102018309",
36                                     imageUrl: "https://cdn4.iconfinder.com/data/icons/famous-characters-add-on-vol-1-flat/48/Famous_Chara

```

```

AndroidManifest.xml × ContactAdapter.java × MainActivity.java ×
32         imageUrl: "https://cdn4.iconfinder.com/data/icons/famous-characters-add-on-vol-1-flat/48/Fa
33
34         listContact.add(new Contact( name: "Bat Man",
35                                     phone: "102018309",
36                                     imageUrl: "https://cdn4.iconfinder.com/data/icons/famous-characters-add-on-vol-1-flat/48/Famous_Chara
37
38         listContact.add(new Contact( name: "Groot",
39                                     phone: "102018307",
40                                     imageUrl: "https://cdn4.iconfinder.com/data/icons/famous-characters-add-on-vol-1-flat/48/Famous_Chara
41
42         listContact.add(new Contact( name: "Sonic",
43                                     phone: "102018301",
44                                     imageUrl: "https://cdn4.iconfinder.com/data/icons/famous-characters-add-on-vol-1-flat/48/Famous_Chara
45
46         contactAdapter = new ContactAdapter(listContact);
47         contactAdapter.setListener(this);
48         layoutManager = new LinearLayoutManager(getApplicationContext());
49         rv.setAdapter(contactAdapter);
50         rv.setLayoutManager(layoutManager);
51     }
52
53     @Override
54     public void onClick(View view, int position) {
55         Contact contact = listContact.get(position);
56         Toast.makeText( context: this, contact.getName(), Toast.LENGTH_LONG)
57             .show();
58     }

```

3. Hasil akhir ketika di run pada mobile

